

[0076] What is claimed is:

1. A method comprising:
receiving a first portion of a data block on a first shared-communications channel;
receiving a second portion of said data block on a second shared-communications channel;
transmitting a first acknowledgment frame into said second shared-communications channel only, wherein said first acknowledgment frame indicates receipt of said first portion of said data block; and
transmitting a second acknowledgment frame into said first shared-communications channel only, wherein said second acknowledgment frame indicates receipt of said second portion of said data block.

2. The method of claim 1 wherein said first acknowledgment frame also indicates receipt of said second portion of said data block, and wherein said second acknowledgment frame also indicates receipt of said first portion of said data block.

3. The method of claim 1 wherein a first station transmits using said first shared-communications channel and said second shared-communications channel simultaneously and wherein a second station transmits using said first shared-communications channel only.

4. The method of claim 1 wherein said first acknowledgment frame and said second acknowledgment frame are transmitted at substantially the same time.

5. A method comprising:
transmitting a first portion of a data block into a first shared-communications channel;
transmitting a second portion of said data block into a second shared-communications channel; and
receiving a first acknowledgment frame on said second shared-communications channel, wherein said first acknowledgment frame indicates receipt of said first portion of said data block.

6. The method of claim 5 further comprising:
receiving a second acknowledgment frame on said first shared-communications channel, wherein said second acknowledgment frame indicates receipt of said second portion of said data block.

7. The method of claim 6 wherein said first acknowledgment frame also indicates receipt of said second portion of said data block, and wherein said second acknowledgment frame also indicates receipt of said first portion of said data block.

8. The method of claim 5 wherein a first station transmits using said first shared-communications channel and said second shared-communications channel simultaneously and wherein a second station transmits using said first shared-communications channel only.

9. The method of claim 5 wherein transmitting said first portion of said data block and transmitting said second portion of said data block occur (i) at substantially the same time and (ii) with the same modulation.

10. The method of claim 5 further comprising:
transmitting a first control frame into said first shared-communications channel before transmitting said first portion of said data block; and
transmitting a second control frame into said second shared-communications channel before transmitting said second portion of said data block.

11. The method of claim 10 wherein said first control frame is one of a Request_to_Send frame and a Clear_to_Send frame.

12. A method comprising:
receiving an acknowledgment that indicates receipt of at least one portion of a data block on at least one of (i) a first shared-communications channel and (ii) a second shared-communications channel; and
transmitting a portion of said data block into at least one of (i) said first shared-communications channel and (ii) said second shared-communications channel, wherein the choice of shared-communications channel used for transmitting said portion is based on (a) the contents of said acknowledgment and (b) the shared-communications channel over which said acknowledgment was received.

13. The method of claim 12 wherein said acknowledgment comprises at least one of (i) a first acknowledgment frame received on said second shared-communications channel and (ii) a second acknowledgment frame received on said first shared-communications channel.

14. The method of claim 13 wherein said first acknowledgment frame indicates receipt of at least one of (i) a first portion of said data block sent on said first shared-

communications channel and (i) a second portion of said data block sent on said second shared-communications channel.

15. The method of claim 12 wherein transmitting said portion of said data block occurs over the combination of said first shared-communications channel and said second shared-communications channel.

16. An apparatus comprising:

a receiver for:

- (i) receiving a first portion of a data block on a first shared-communications channel; and
- (ii) receiving a second portion of said data block on a second shared-communications channel; and

a transmitter for:

- (i) transmitting a first acknowledgment frame into said second shared-communications channel only, wherein said first acknowledgment frame indicates receipt of said first portion of said data block; and
- (ii) transmitting a second acknowledgment frame into said first shared-communications channel only, wherein said second acknowledgment frame indicates receipt of said second portion of said data block.

17. The apparatus of claim 16 wherein said first acknowledgment frame also indicates receipt of said second portion of said data block, and wherein said second acknowledgment frame also indicates receipt of said first portion of said data block.

18. The apparatus of claim 16 wherein said receiver and said transmitter constitute a first station and wherein a second station transmits using said first shared-communications channel only.

19. The apparatus of claim 16 wherein said transmitter transmits said first acknowledgment frame and said second acknowledgment frame at substantially the same time.

20. An apparatus comprising:

a transmitter for:

- (i) transmitting a first portion of a data block into a first shared-communications channel; and

(ii) transmitting a second portion of said data block into a second shared-communications channel; and

a receiver for receiving a first acknowledgment frame on said second shared-communications channel, wherein said first acknowledgment frame indicates receipt of said first portion of said data block.

21. The apparatus of claim 20 wherein said receiver is also for receiving a second acknowledgment frame on said first shared-communications channel, wherein said second acknowledgment frame indicates receipt of said second portion of said data block.

22. The apparatus of claim 21 wherein said first acknowledgment frame also indicates receipt of said second portion of said data block, and wherein said second acknowledgment frame also indicates receipt of said first portion of said data block.

23. The apparatus of claim 20 wherein said receiver and said transmitter constitute a first station and wherein a second station transmits using said first shared-communications channel only.

24. The apparatus of claim 20 wherein said transmitter transmits said first portion of said data block and said second portion of said data block (i) at substantially the same time and (ii) with the same modulation.

25. The apparatus of claim 20 wherein said transmitter is also for (i) transmitting a first control frame into said first shared-communications channel before transmitting said first portion of said data block and (ii) transmitting a second control frame into said second shared-communications channel before transmitting said second portion of said data block.

26. The apparatus of claim 25 wherein said first control frame is one of a Request_to_Send frame and a Clear_to_Send frame.

27. An apparatus comprising:

a receiver for receiving an acknowledgment that indicates receipt of at least one portion of a data block on at least one of (i) a first shared-communications channel and (ii) a second shared-communications channel; and

a transmitter for transmitting a portion of said data block into at least one of (i) said first shared-communications channel and (ii) said second shared-communications channel, wherein the choice of shared-communications channel used for transmitting said portion is based on (a) the contents of said acknowledgment and (b) the shared-communications channel over which said acknowledgment was received.

28. The apparatus of claim 27 wherein said acknowledgment comprises at least one of (i) a first acknowledgment frame received on said second shared-communications channel and (ii) a second acknowledgment frame received on said first shared-communications channel.

29. The apparatus of claim 28 wherein said first acknowledgment frame indicates receipt of at least one of (i) a first portion of said data block sent on said first shared-communications channel and (i) a second portion of said data block sent on said second shared-communications channel.

30. The apparatus of claim 27 wherein transmitting said portion of said data block occurs over the combination of said first shared-communications channel and said second shared-communications channel.